ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF AIR

November 2003

Responsiveness Summary for Public Questions and Comments on a Revised Construction Permit for Zion Energy, LLC

Site Identification No.: 097200ABB
Application No.: 99110042

TABLE OF CONTENTS

INTRODUCTION:

Zion Energy L.L.C. (Zion Energy) has requested a revised construction permit for its power plant in Zion. The revised permit would include commitments that Zion Energy has made as part of a Compliance Commitment Agreement (CCA) to address changes in the configuration of the plant, including the reduction in stack and building heights, location of fence lines, and other minor site changes. These commitments address operation of the turbines when firing fuel oil, the backup fuel for the plant when natural gas is not available. These commitments reduced the number of turbines that may be fired on oil at the same time and lowered the limit on the sulfur content of the oil. Air quality dispersion modeling submitted by Zion Energy with the commitments demonstrates that the changes in the configuration of the plant do not result in it having air quality impacts that are substantially different than addressed with the original construction with the original design for the plant.

Upon review of comments received during the public comment period and final review of the application, the Illinois EPA has determined that the application meets the standards for issuance of a construction permit. Accordingly, on November 21, 2003, the Illinois Environmental Protection Agency (Illinois EPA) issued Zion Energy a revised construction permit. The revisions to the construction permit will be reflected in the Clean Air Act Permit Program (CAAPP) permit for the plant.

DESCRIPTION OF PLANT:

The Zion Energy Center was issued a construction permit on December 8, 2000. The permit addressed a plant with five “simple cycle” combustion turbines and five auxiliary natural gas fired boilers. The plant would be fired on natural gas as its primary fuel with capability to fire very low sulfur distillate oil in the turbines as a backup fuel. Calpine Central L.P is the current owner of the plant, i.e., Zion Energy LLC. Calpine acquired the project in October 2000 when it purchased Skygen Energy, the company that submitted the original application for the plant.

While the original construction permit authorized the Zion Energy to install up to five turbines and five boilers, as of September 2002, the Zion Energy had only undertaken construction of three turbines. Accordingly, the authorization to install other units has lapsed and the Illinois EPA has also revised the permit so that it no longer addresses units that the Permittee is no longer authorized to construct. With the three turbines, the plant only has the ability to generate up to about 480 MW (nominal) of electrical energy. The permitted emissions of the plant are also about 40 percent lower that allowed by the original construction permit.

Zion Energy commitment for firing of oil in the turbines was to operate no more than three units on oil at the same time. Thus the reduction in the number of turbines has eliminated the need to include this commitment in the permit. The only commitment that needed to be included in the permit is the lower limit on the sulfur content of oil, and associated reductions in the permitted SO_2 emissions.

COMMENT PERIOD AND PUBLIC HEARING:

The Illinois EPA Bureau of Air evaluates applications and issues permits for sources of emissions to the atmosphere. An air permit application must appropriately address compliance with applicable air pollution control laws and regulations before a permit can be issued. Following its initial technical review of Zion Energy’s application, the Illinois EPA, Bureau of Air

made a preliminary determination that the application met the standards for issuance of a construction permit and prepared a draft permit for public review and comment.

The public comment period began on July 26, 2003, with the publication of a notice in the Waukegan News Sun. Notices were also published in this paper on August 2 and August 9, 2003. A public hearing was held on September 10, 2003, at the Zion Park District, Shiloh Center in Zion to receive oral comments and answer questions regarding the application and draft air permit. The comment period remained open until October 10, 2003, to receive written comments.

AVAILABILITY OF DOCUMENTS:

The permit issued to Zion Energy and this responsiveness summary are available on the Illinois Permit Database at www.epa.gov/region5/air/permits/ilonline.htm (please look for the documents under All Permit Records, PSD, New). Copies of these documents may also be obtained by contacting the Illinois EPA at the telephone numbers listed at the end of this document.

APPEAL PROVISIONS:

The Illinois EPA does not believe that individuals who participated in the public comment period on the revision of this construction permit are entitled to a review of the permit decision by the United States Environmental Protection Agency's (USEPA) Environmental Appeals Board (Appeals Board). This is because the revised permit does not relax any provisions of the original permit. Instead, the revised permit incorporates new restrictions on the plant, which were established by the Illinois EPA under its administrative and enforcement authority pursuant to Sections 4 and 31 of the Environmental Protection Act. As the revised permit does not include provisions for certain emissions units that may no longer be constructed, the source's failure to commence construction of those units already made such provision obsolete. In addition, the revisions to this permit that have been made should not provide a general opportunity for review of other provisions of the permit, which have not revised and which are unaffected by the permit revisions.

These circumstances are different from those of the original construction permit for this plant. The original permit granted approval to construct the plant pursuant to the federal rules for Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21, and established Best Available Control Technology (BACT) for emissions of pollutants subject to PSD. Accordingly, for certain individuals who had appropriately participated in the public comment period prior to the original permit decision, an opportunity existed to petition the Appeals Board to review that decision, as provided by USEPA regulations, "Appeal of RCRA, UIC and PSD permits," 40 CFR 124.19.

The USEPA's rules for Appeals of PSD permits do not explicitly address the circumstances in which an individual may request review by the Appeals Board of a decision to revise a PSD permit. Accordingly it is possible that individuals who appropriately participated in the public comment period for the revised permit are entitled to request review of the permit decision as it involves a PSD permit. If individuals are interested in pursuing petitions to the Appeals Board for such review, they are advised to conduct their own investigation into the legal basis, if any, to pursue such review. Further information on the procedures for such appeals is available on the Appeals Board website www.epa.gov/eab/eabfaq.htm.

QUESTIONS AND COMMENTS:

The following is the Illinois EPA's detailed response to significant questions and comments submitted during the public comment period that relate to the revision of the Construction Permit for the Zion Energy Center. Individual comments have been consolidated where a common concern was expressed and a single response could be provided.

This material does not address questions and comments concerning the draft Clean Air Act Permit Program (CAAPP) permit for the Zion Energy Center, including matters related to operation of the plant. The Illinois EPA will be providing its response on public questions and comments concerning those matters in a separate document when final action is taken on the CAAPP application, after the conclusion of the period for USEPA review of a proposed CAAPP permit for the plant.

General:

1. How does the Illinois EPA deal with the fact that only a fraction of the NOx emissions from combustion sources is emitted as NO_2, the noxious form of the NOx, for which an ambient air quality standard applies?

   Response: Even though most of the NOx from combustion sources, like the turbines at this plant, is emitted in the form of NO, an innocuous form of NOx, which gradually reacts and converts to NO_2 in the atmosphere, emission data for NOx is routinely expressed in terms of equivalent NO_2. This is because the reference test methods and continuous emission monitoring methods developed by USEPA are designed to standardize measured results as if all NOx is emitted as NO_2. This is different than ambient monitoring, where ambient "NOx" monitors are designed to measure only NO2 in the air, or to obtain separate measurements for NO_2 and NO.

   This practice is readily confirmed for the design emission data for the turbines from General Electric submitted in the original permit application for the Zion Energy Center. In particular, the design emission data for NOx is specifically qualified that emissions are reported "as NO_2." The close agreement between this design emission data and the actual emissions data from the continuous monitoring systems confirms that the design data addresses all NOx emissions from a turbine, expressed as equivalent NO_2. If the General Electric design data only addressed the portion of the NOx emissions from the turbines actually present as NO_2, continuous monitoring of actual NOx emissions from the turbines would have shown much higher emissions than the design data.

   As a general matter, it is appropriate to regulate all NOx emitted from sources, without distinction between NO and NO_2, as the NO eventually converts to NO_2, and also contributes to acid rain and other negative impacts on the environment.

2. I have read conflicting information about the size of the property on which Zion Energy is located. The original permit issued on December 8, 2000, in Finding 2 states that the plant would be constructed on a 114-acre parcel of property. (This is also what the City of Zion said at this time about the project.) However, Calpine Corporation in a report to the federal Securities and Exchange Commission dated December 31, 2000 stated that it owns 49 acres in Zion, Illinois. I don't know if the plant is on located on 114 acres or

49 acres, or what it is? If the source can't keep track of the size of the property, how can I be confident that this plant will run be properly and emission data accurately reported?

Response: The information in the original permit finding was for descriptive purposes, to describe the general location of the plant. The power plant itself sits on only a portion of the property. Accordingly, the two statements about size of the property and plant were not necessarily contradictory. Calpine has property at the site that has not been developed as part of the power plant.

The circumstances surrounding acquisition of property for the proposed plant were very different than those at are present now for the emissions of the constructed plant. Actual data is available for emissions of the plant based on testing and, for NOx, monitoring of the turbines, and records and operating logs for the turbines, including records for actual usage of natural gas and oil.

Reduction In Stack Heights:

3. If a building contractor deviates from the plans approved as part of the building permit for a project, the contractor may be required to tear out the unapproved work or construction activity may be stopped. Why wasn't the reduction in the heights of the stacks for the turbines addressed in a similar manner?

Response: The circumstances presented by the reduction in the heights of the stacks for the turbines at the Zion Energy are more complex than those with building codes, or zoning ordinances or posted traffic regulations. The applicable air pollution control regulations do not specify a minimum stack height for turbines like those at this plant. Rather, the proposed height of the stacks at a new major plant, like Zion Energy, is reviewed during the processing of the construction permit application for a proposed plant. The review performed for the proposed plant showed that existing air quality would not be threatened by the emissions of five turbines at the planned stack and building heights. That is, the review showed that the air quality would continue to comply with applicable National Ambient Air Quality Standards (NAAQS) for the pollutants emitted in significant amounts from the plant and in general that the proposed plant, as planned, would not have a significant impact on air quality.

However, the review did not evaluate the minimum height of the turbine stacks necessary to protect air quality. Indeed, the physical height of a stack is only one factor in determining the dispersion and air quality impacts from a particular stack. Also relevant, are the velocity and thermal buoyancy of the exhaust gases discharged from the stack, which for these turbines results in an effective stack height that is much higher than the physical stack height. The height of the associated structure and any nearby structures also may influence dispersion as they disrupt the flow of wind. (It is relevant that both the stack heights and the structure enclosing the turbines were lowered.) Finally, the distance from a plant's fence line and orientation of stacks is also a factor affecting air quality impacts. Thus it is not practical to establish to establish minimum requirements for the stacks at a proposed plant, to address possible changes to plans for the plant that occur during the detailed design and actual development of the plant.

The original construction permit for Zion Energy addressed these circumstances. It generally required that the proposed plant be developed consistent with the description

provided in the permit application but allows for changes from the application to occur if they are approved by the Illinois EPA. Thus the issue posed for the reduction in the stack height of the turbines was not the reduction itself but Zion Energy obtaining approval from the Illinois EPA in a timely manner for the change.

4. I contacted the Illinois EPA and submitted evidence in October 2001 that Zion Energy had changed the stack heights. This was five months before Zion Energy finally admitted that it had changed the stacks. My concerns were ignored by the Illinois EPA.

Response: The Illinois EPA does not have a record of material being submitted to it as suggested by this comment. Written material was submitted to the Illinois EPA by this individual in July and August 2001. A subsequent letter was submitted in June 2002, after the Illinois EPA has been informed by Zion Energy about the change in stack and building heights. The material submitted in 2001 identified changes in the layout of the plant accompanying the detailed design of the plant but did not identify any change in the height of the stacks for the turbines. This material also suggested that only two turbines would be built initially.

The Illinois EPA was informed by Zion Energy of the reduction in the stack height in December 2001. The Illinois EPA immediately instructed Zion Energy that it would have to have further air quality modeling performed to assess the effect of the new stack heights on air quality impacts. The Illinois EPA required this further modeling to be performed by a qualified consultant at Zion Energy's expense. The Illinois EPA also confirmed that at most two turbines would be operated at the plant in 2002, not five turbines as allowed by the construction permit.

In February 2002, further modeling was submitted by the consultant hired by Zion Energy. When the Illinois EPA found that this modeling was inadequate, notably because it only evaluated a year of weather data, the Illinois EPA required Zion Energy to have additional modeling properly performed, including five years of weather data. In addition, a Violation Notice was sent to Zion Energy because it failed to supply adequate modeling to support the new stack height.

The additional modeling was received from Zion Energy in August 2002. One of the reasons for the length of time to prepare this modeling was the need to exchange a new modeling protocol with the Illinois EPA and include several new emissions units at the nearby Onyx Zion landfill. This second set of revised modeling showed acceptable results for operating five turbines on natural gas. That is, the results were consistent with the air quality impacts originally modeled for the plant with higher stack and building heights.

Incidentally, Zion Energy then conducted a third set of revised modeling. This is because the second set of revised modeling showed that use of backup fuel oil in five turbines could have 3-hour average impact for sulfur dioxide (SO_2) that would be above the PSD significant impact level. This would not have been consistent with the modeling accompanying the original permit, which had showed that 3-hour average SO_2 impacts would be less than significant. Rather than pursue a revised construction permit that would provide for 3-hour average SO_2 impacts that would qualify as significant, Zion Energy elected to conduct additional revised modeling addressing firing of oil in the turbines. This third set of modeling, which assumed that at most three out of the five turbines would fire oil at any time, showed acceptable results for 3-hour average SO_2.

5. The Illinois EPA was tremendously slow to respond the reduction in stack height. We had gotten the diagrams from the Stormwater Management application, clearly showed the layout of buildings and pads and things that had nothing to do with what was in the application. We sent it to the Illinois EPA, and nothing happened until we finally went out and looked at the stacks, compared them to the Com Ed power lines, and realized the stacks are supposed to be the same height and they weren't. Then the Illinois EPA calls, and there is a response. The Illinois EPA could have responded months before and could have responded in time for them not to build the plant to the different specifications. The Illinois EPA chose not to.

   Response: As confirmed by this comment, the reduction in stack height was not identified in the material originally submitted to the Illinois EPA by members of the public. It only became readily apparent after the turbines had been constructed.

   In addition, as explained above, the Illinois EPA was not slow in responding, once the reduction in stack height was identified. However, the amount of time that followed, until final resolution and the change could be approved, was certainly far greater than was originally anticipated.

Air Quality Modeling:

6. How is the size of the plant property accounted in air permitting process? Does the air quality modeling consider acreage that a plant is built on and how does the size of the property affect the air quality modeling?

   Response: The actual size of the property doesn't matter for purposes of the air permitting process. What matters for the purpose of permitting is the location of the fence around a plant that excludes access by the general public. This is because the air quality modeling evaluates ambient impacts at receptors beyond the fence line.

7. I have previously submitted written comments on the air modeling that Zion Energy conducted raising several concerns about the modeling, which the Illinois EPA to this day has not addressed.

   Response: Although the Illinois EPA has not previously responded in writing to the commenter, the Illinois EPA did address concerns regarding air quality modeling for the Zion Energy Center raised in August 2002 in e-mail correspondence. This occurred in a telephone conversation with the commenter. It also occurred through actions such as an update to the modeling protocol, changes to the source inventory, and supplemental internal evaluations that responded to relevant issues raised.

8. A review of the revised modeling shows that Zion Energy used outdated material from the modeling it conducted for the original permit in 1999/2000. The ambient monitoring data appears to be four years old and there is no indication that the inventory of existing sources used for the background analysis was updated, either.

   Response: The revised modeling intentionally used background data from the same monitoring stations and time period (1996, 1997, and 1998) to maintain consistency with the initial analysis. The selection of monitored data was conservative, and included the

maximum concentrations for these three years. A follow-up evaluation of more recent monitoring data for 1999, 2000, 2001, and 2002 has shown that monitored values are generally less than those used by Zion Energy, that is ambient air quality has improved. By using the "historic" data, Zion Energy was not allowed to benefit from these improvements, which were independent of its project. The single exception is the monitored data for PM10, 24-hour average. The slight increase in the monitored data for this pollutant would not alter the conclusions of the air quality analysis.

Illinois EPA provided inventories of existing sources for the original 1999/2000 modeling. In response to a comment questioning the completeness of the Wisconsin emission inventories used in the cumulative air impact analyses, units from the Badger Generating Company facility in Pleasant Prairie, Wisconsin were subsequently included and evaluated. The impact of these units on the modeling of the Zion Energy Center was negligible. As part of the revised modeling to address the reduction in stack heights, in July 2002, the Illinois EPA directed Zion Energy to expand the inventory of existing sources in the area to include recently permitted sources (electrical generators and a proposed flare) at the nearby Onyx Zion Landfill and these units were included in subsequent modeling. The updated inventory for Kenosha County, Wisconsin was received from the Wisconsin Department of Natural Resources in September 2002. The Illinois EPA's evaluation of Zion Energy's third set of modeling (October 2002) incorporated these additional Wisconsin sources in audit runs for SO_2 and PM10 cumulative impact analyses. These additional sources did not meaningfully change the maximum modeled concentrations for the Zion Energy Center.

9. The impact of the start-up emissions was not calculated under "worst-case scenario" conditions.

Response: A "worst-case" modeling scenario incorporating operational restrictions for fuel oil firing by the turbines was included in Zion Energy's third set of modeling (October 2002). A "start-up" mode assessment for oil firing within this "worst-case" framework was reported for SO_2, as requested by Illinois EPA. The maximum modeled impact, 10.74 micrograms per cubic meter ($\mu g/m^3$) was well below the 3-hour average SO_2 NAAQS (1300 $\mu g/m^3$).

In the August 2002 modeling, maximum modeled impacts for CO and SO_2 were provided for the "worst-case" natural gas-fired "start up." There was a question about the appropriateness of Zion Energy's choice of 45 º F ambient temperature as the "start up" mode parameters for the CO modeling. Illinois EPA's audit evaluated a both 45 º F and 59 º F ambient temperature for "worst-case" 1-hour average CO impacts. In all instances, modeled impacts were well below the 1-hour average CO NAAQS (40,000 $\mu g/m^3$) and the 3-hour average SO_2 NAAQS.

10. In a letter Illinois EPA sent to USEPA, Region V on this plant, the Illinois EPA states, "for evaluation of NOx impacts the analysis relied on the second level ozone limiting method." Reiterating comments I have made before, the 0.9 conversion factor was applied inappropriately. In allowing Zion Energy to use the 0.9 factor, Illinois EPA lets Zion Energy cover up the fact that this plant violates ambient air quality standards.

Response: The plant does not violate the NAAQS for NO_2 or other pollutants. This was readily apparent from the first set of revised modeling supplied by Zion Energy. The use of the ozone limiting method for the NO_2 modeling does not affect this conclusion.

In determining NO_2 concentrations, USEPA modeling guidance at 40 CFR Part 51, Appendix W, Section 6.2.3 provides for a tiered approach for modeling of individual sources. The initial approach (Tier I) conservatively assumes a total conversion of NO to NO_2 has occurred. The Tier I results can be adjusted by an empirically derived value for NO_2/NOx conversion of 0.75 (the national default) or a location specific value based upon representative monitoring data for the area. Applying a NO_2/NOx conversion value to the Tier I results constitutes the second level analysis (Tier II). Based upon the ambient monitoring data NO_2 and NOx for Lake County, the Illinois EPA determined that a NO_2/NOx conversion value of 0.9 was appropriate.

Changes to the Provisions of the Permit:

11. The original construction permit had a Best Available Control Technology (BACT) requirement limiting the sulfur content of the fuel oil fired in the turbines to no more than 0.05 percent by weight (Condition 3(g)). The draft of the revised permit would change the limit to 0.048 percent by weight without Zion Energy having conducted a revised BACT analysis. The revised permit cannot be issued without a new BACT review.

    Response: The change in this limit is one commitment in Zion Energy Center's Compliance Commitment Agreement (CCA) to address the reduction in stack height and the changes in the configuration of the plant. With this commitment, the modeling shows that SO_2 impacts on a 3-hour average stay below the significant impact level.

    The original BACT determination for the plant is not being altered or reviewed again. To make this clear, the BACT limitation in Condition 3(g) has not been changed. Instead, Condition 9(b) has been added for this new restriction on the plant pursuant to the CCA.

12. Since every peaker plant would be subject to the same Act-of-God kind of interruption of the natural gas supply, why doesn't every peaker plant have oil-burning capability? The real reason there would be an interruption in the natural gas supply is because Zion Energy has voluntarily signed an interruptible contract with its gas supplier. As Zion Energy creates its own interruption, why is the public subjected to the additional pollution from the oil burning, especially since the plant can do just fine on natural gas? In fact, Zion Energy has used more oil demonstrating that it can burn oil than it has actually needed to use for regular operation. Considering the actual record on oil, it seems that the plant doesn't need the oil capability. Wouldn't it make sense to reopen BACT and make the determination that oil is not BACT and this plant should not use oil?

    Response: The revisions that are being made to the permit do not provide a basis to reopen the original BACT determination, which allows oil to be burned as a back-up fuel. Moreover, no information has been presented that would suggest that this was an inappropriate determination. While many peaker plants do not have fuel oil capability, Zion Energy has installed the additional features and equipment to have this capability and provide the additional reliability that they provide. As part of the technical support for the original BACT determination, Zion Energy explained that it was not possible to get a firm commitment for natural gas supply for this plant given the capacity and usage of the pipelines serving the area. However, other than for purposes of operational and emissions testing, the permit still restricts the plant from burning oil except in and to the extent that circumstances make it impossible to fire natural gas in the turbines.

In addition, it is fully consistent with the use of oil as a backup fuel at this plant that oil has only been used to demonstrate the ability of the plant to burn oil. This fact also does not demonstrate that interruptions in the natural gas supply will not occur in the future, which could require the plant to use oil.

13. I have seen a definition that states that a peaker plant runs no more than about 10 percent of the time, i.e., 876 hours per year. However, this permit allows each turbine to operate for 2300 hours per year, on a three-year average, and up to 3300 hours in a single year. This permit should set lower operating limits for the turbines, closer to 876 hours per year. This is because the current limits overstate how much peaker plants operate. Peaker plants are the power plants that operate infrequently, that typically fire up on short notice on summer days to support the grid and prevent brownouts.

Response: The revisions that are being made to the permit also do not provide a basis to make changes to these limits in the existing permit. In addition, these limits in the permit are not inconsistent with the actual operation of the plant as a peaker plant.

The limits in the permit are intended to provide the plant flexibility to operate as needed, but as a peaker plant. The fact that the turbines are simple cycle turbines generally assures that they will be operated as peaking units. There are also certain qualitative provisions in the permit, which supplement this and would allow action to be taken if the turbines were not operated as peaking units. However, Zion Energy requested a permit with operating limits that were at the levels set in the original permit. The modeling and other evaluations conducted for the application, which addressed five turbines, showed that the plant could be permitted with such limits.

The presence of these limits does not mean that this plant will actually operate for 2300 hours per year. In 2002, when the units also were run for the purpose of emission testing, the turbines at his plant only ran for a total of 1340 hours, averaging only about 670 hours each. In 2003, through the month of August, the turbines ran for a total of 690 hours, for an average of about 230 hours each. The actual operation of the plant will depend on the need for the expensive electric power that it can generate.

The Illinois EPA's understanding is that Zion Energy sought the high operating limits that it did because, like many merchant peaker plants, it wanted to enter into a long-term contract to provide its power to a specific power company. These contracts generally serve to reduce or stabilize the cost of electricity since the power company does not have to buy peak power at the wholesale prices on the spot market. The power companies that enter into these contracts with peaker plants want to be able to rely on the plants and obtain power whenever needed. Accordingly, peaker plants seek permits with high operating limits that facilitate such contracts and satisfy the power suppliers.

Finally the USEPA "definition" being referred to by this comment actually serves as an applicability criteria expressed in terms of the actual operation for whether NOx continuous emission monitoring must be conducted for a unit. The criteria provides that if a unit operates more than 876 hours on a three-year average or more than 1752 hours in a single year, that a NOx monitor must be installed. As such this provision does not actually the limit the operation of a unit, nor is it relevant for this plant as NOx continuous emissions monitoring is required irrespective of the annual hours of operation.

Status of Turbine 3

14. Illinois EPA has to thoroughly investigate the commencement of construction of Turbine 3. If the permit had expired, construction without a permit was illegal. Until such an investigation is concluded, Illinois EPA may not issue a PSD permit for the plant.

Response: The Illinois EPA has conducted such an investigation. In early 2003, the Illinois EPA required Zion Energy to provide detailed information to show whether commencement of construction of Turbine 3 had been timely. Upon review of that information, the Illinois EPA concluded that construction of Turbine 3 had been commenced in a timely manner as required by the construction permit and the PSD regulations. In addition, as only Turbines 1, 2 and 3 have been constructed in a timely manner, the revised permit only addresses these three turbines, rather than five turbines as originally permitted.

15. In its April 2003 response to the Illinois EPA, Calpine makes several statements that warrant further review. Illinois EPA has to request further evidence in the form of contractor bills or invoices that show construction was begun before the permit expired.

a. Calpine states that this turbine and associated generator had been delivered to the site in March 2002, as shown in an attached "Executive Summary from the April 2002 GE Monthly report." However, the summary reads only that "the units were off-loaded" from railcars in Pleasant Prairie, Wisconsin, not that they were transported to the plant.

b. The two documents that would supply valid information about this issue, i.e., the "limited Notice to Proceed" with Kenny Construction and the "binding agreement letter" between Calpine and WEPCO, were claimed by Calpine to be confidential. Since Illinois EPA's concern has to be with the date of activities and not the financial agreements, both documents can be sufficiently edited by Calpine for confidential content and still be submitted to Illinois EPA. I request that Illinois EPA ask Calpine to release them.

c. Obtaining a permit from Lake County Stormwater Management Commission and a building permit from the City of Zion does not mean that construction commenced. In addition, it is questionable if the document provided by Calpine involving stormwater management is indeed a permit or is an application for a permit.

Response: As explained above, the Illinois EPA was satisfied with the written response provided by Zion Energy on this issue. Under the federal PSD rules, as addressed by Condition 21 of the original construction permit, Zion Energy must have "commenced construction" of Turbine 3 within 18 months of the effective date of the construction permit, i.e., by no later than September 27, 2002. To have commenced construction, Zion Energy must have begun actual on-site construction of Turbine 3 or, alternatively, must have entered into binding, contractual obligations to undertake construction that could not have been cancelled or modified without incurring substantial loss.

In its April 2003 submission, Zion Energy provided details concerning both the physical construction activities undertaken at the site and its contractual obligations. The Illinois EPA's inquiry focused primarily upon the actual construction activities, as the information conveyed by Zion Energy about construction of Turbine 3 revealed ample evidence about timely commencement of construction. Specifically, the Illinois EPA observed

Turbine 3 at the site in June 2002 when emission testing of Turbines 1 and 2 was conducted. Site grading, excavation, foundation work, and the pouring of the concrete foundation for Turbine 3 were all completed as of September 23, 2002. The pouring of the foundation was particularly important because it is begins work on permanent features of the plant related to Turbine 3. Given the activities that were completed prior to the expiration of the 18-month construction approval, the Illinois EPA reasonably concluded that Zion Energy had timely commenced construction of Turbine 3 in accordance with the construction permit and PSD regulations.

Incidentally, the Illinois EPA agrees that the existence of local permits does not constitute commencement of construction. The contract documents referenced by Zion Energy in its response might also have proven informative if on-site construction activity had not occurred. However, the Illinois EPA was able to determine based on the actual, physical activity at the site that construction of Turbine 3 commenced in a timely manner.

Enforcement:

16. The Illinois EPA needs to explain why it handled the reduction in stack height at the Zion Energy Center in the way that it did. This is now appropriate as the case is closed. I believe that this explanation will show that the Illinois EPA erred in not assessing a penalty and I expect the Illinois EPA to explain how this mistake can be remedied.

    Response: It is not appropriate for the Illinois EPA to respond in detail to this request as it concerns an enforcement decision. Effective enforcement requires the ability to exercise judgment and discretion. The effectiveness of future Illinois EPA enforcement activity would be compromised if specific details of these deliberations were made public. This is because it would provide information on availability of staff and other resources, the nature of other pending cases, the legal strengths and weaknesses of particular cases, expectations for resolution of cases, and the nature of enforcement priorities. If this information were made public, it would generally weaken the Illinois EPA's position in pursuing other enforcement cases.

    As to the whether the Illinois EPA erred in not pursuing further action against Zion Energy, the Illinois EPA does consider that the reduction in the stack height of the turbines represented a significant departure from a provision in the original construction permit. However, the Illinois EPA determined that the matter did not warrant the further use of its enforcement resources, based on the nature of this change and its consequences, the surrounding circumstances, and Zion Energy's responsiveness to the matter, including the commitments made in its Compliance Commitment Agreement..

17. I need to be confident that no "deals" are negotiated between the Illinois EPA and sources behind closed doors in enforcement cases.

    Response: The Illinois EPA does not possess the ability to resolve cases in the manner suggested by the comment. Title VIII of the Environmental Protection Act sets forth a formal enforcement process that the Illinois EPA must follow, starting with sending a written notice of alleged violations to the alleged violator. The alleged violator then has an opportunity to respond to the allegations. Resolution or settlement of the alleged violations with the Illinois EPA may occur if the Illinois EPA accepts the alleged violator's Compliance Commitment Agreement (CCA). If a CCA is not accepted, the Illinois EPA

may refer the matter to the Office of the Attorney General or to the local State's Attorney for further legal action. In addition, acceptance of a CCA by the Illinois EPA does prevent these offices or other parties from pursuing further legal action independent of the Illinois EPA. Finally, the terms or conditions upon which all alleged noncompliance are resolved are memorialized in written documents (i.e., CCAs, Consent Decrees, or Compliance Orders) that are readily available to the public upon request.

FOR ADDITIONAL INFORMATION

Questions about the public hearing and permit decision should be directed as follows:

Public Hearing Procedures and Exhibits

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Responsiveness Summary

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Listing of Significant Changes between the Draft Permit and Issued Permit

Conditions 3(g) and 9(b):

No change is made in the limitation in Condition 3(g). That is, the original sulfur content limitation of 0.05 percent by weight for the backup fuel oil, which represents the original determination of Best Available Control Technology (BACT), is retained in the issued permit.

Condition 9(b) has been added to incorporate the commitment from Zion Energy Center's Compliance Commitment Agreement (CCA).